

CLAIMS:

1. A method for treatment of hard tissue present in a fluid-filled body cavity, the cavity having a diameter of 3 mm or less, the method comprising: applying to said hard tissue, or to the proximity of said hard tissue, a laser beam produced by an Er:YAG laser device.
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2. A method according to Claim 1, wherein the fluid-filled body cavity is selected from salivary ducts and temporomandibular joints.
3. A method according to Claim 1, wherein the hard tissue is fibrous scar tissue or calculi.
- 10 4. A method according to Claim 1, wherein the hard tissue is disintegrated to fragments having a size of less than 2 mm.
5. A method according to Claim 1, wherein the laser beam is provided through an endoscope, said endoscope also used for viewing the hard tissue.
6. A method according to Claim 5, wherein the endoscope is a Nahlieli type
15 sialo-endoscope.
7. A method according to Claim 1, wherein the parameters of the laser beam are 200-1000 millijoule/mm²
8. A method according to claim 7 wherein the parameters of the laser beam are 300-700 millijoule/mm²
- 20 9. A method according to claim 8 wherein the parameters of the laser beam are 500-700 millijoule/mm².
10. A system for carrying out the method of Claim 1, said system comprising:
 - (a) an endoscope for visualizing the interior of the cavity of said
laser beam;
 - 25 (b) an Erbium:YAG laser device located in said endoscope,
adapted to generate a laser beam in order to pulverize the
hard tissue; and

- (c) an optic fiber for delivering the laser beam to the hard tissue or to the vicinity of the hard tissue, the length of the optic fiber being 10-20 cm.

5 **11.** The system according to Claim 10, wherein the endoscope is a Nahlieli type sialo-endoscope, and wherein said delivery of said laser beam is by a rigid, curved optical fiber.

12. An aperture adapted for connecting to a Er:YAG laser having an optic fiber for insertion into a body cavity having a diameter of 3mm or less.

10 **13.** An aperture according to claim 12 having an optic fiber having a length of 10-20 cm.

14. An aperture according to claim 13 wherein the optic fiber is flexible.